IN THE CLAIMS

This listing of claims will replace all prior versions of claims in the application.

Claims 1-25 (canceled)

Claim 26 (previously presented): A peptide mixture comprising at least two different peptides derived from the hepatitis C virus (HCV), at least one of which is a peptide derived from the C protein that binds to at least four different HLA II molecules whose allelic frequency is greater than 5% in the Caucasian population with a binding activity of <1000 nM.

Claim 27 (previously presented): The peptide mixture as claimed in claim 26, further comprising at least one peptide derived from the NS3 protein that binds to at least four different HLA II molecules whose allelic frequency is greater than 5% in the Caucasian population with a binding affinity of <1000 nM.

Claim 28 (previously presented): The peptide mixture as claimed in claim 26, wherein said HLA II molecules are selected from the group of molecules consisting of HLA-DR1, HLA-DR3, HLA-DR4, HLA-DR7, HLA-DR11, HLA-DR13, HLA-DR15, HLA-DRB3, HLA-DRB4, HLA-DRB5 and HLA-DP4.

Claim 29 (previously presented): The peptide mixture as claimed in claim 27, wherein said HLA II molecules are selected from the group of molecules consisting of HLA-DR1, HLA-DR3, HLA-DR4, HLA-DR7, HLA-DR11, HLA-DR13, HLA-DR15, HLA-DRB3, HLA-DRB4, HLA-DRB5 and HLA-DP4.

Claim 30 (previously presented): The peptide mixture as claimed in claim 28, wherein said HLA II molecules are encoded, respectively, by the HLA alleles DRB1*0101, DRB1*0301, DRB1*0401, DRB1*0701, DRB1*1101, DRB1*1301, DRB1*1501, DRB3*0101, DRB4*0101, DRB5*0101, DP*0401 and DP*0402.

Claim 31 (previously presented): The peptide mixture as claimed in claim 29, wherein said HLA II molecules are encoded, respectively, by the HLA alleles DRB1*0101, DRB1*0301, DRB1*0401, DRB1*0701, DRB1*1101, DRB1*1301, DRB1*1501, DRB3*0101, DRB4*0101, DRB5*0101, DP*0401 and DP*0402.

Claim 32 (previously presented): The peptide mixture as claimed in claim 26, wherein the peptides derived from the C protein of HCV are selected from the group consisting of:

a) the peptides corresponding, respectively, to positions 19-47, 27-51, 31-57, 104-133 and 127-167 of the HCV protein,

b) the peptides comprising less than the entire sequence of the peptides as defined in a) and including at least 11 consecutive amino acids of the peptides as defined in a), and

c) the peptides derived from the peptides as defined in a) or in b) and further modified by substitution of cysteine residues for the alanine residues (C $\rightarrow$ A) at position +1 or +2, relative to the amino acid residue at the N-terminal position and/or at position -1, -2 or -3, relative to the amino acid residue at the C-terminal position.

Claim 33 (previously presented): The peptide mixture as claimed in claim 32, wherein the peptides of at least 11 amino acids as defined in b) are selected from the group consisting of:
the peptide included in peptide 27-51 that corresponds to positions 27-41,
the peptide included in peptide 31-57 that corresponds to positions 31-45, and
the peptides included in peptide 127-167 that correspond, respectively, to positions 127-149, 131-145, 131-148, 131-167, 134-148 and 148-167.

Claim 34 (previously presented): The peptide mixture as claimed in claim 32, wherein the peptides as defined in c) are selected from the group consisting of the peptide derived from the C peptide 127-149 (SEQ ID NO:5).

Claim 35 (previously presented): The peptide mixture as claimed in claim 27 , wherein the peptides derived from the NS3 protein are selected from the group consisting of:

a) the peptides corresponding, respectively, to positions 1007-1037, 1036-1055, 1052-1072, 1076-1093, 1127-1153, 1149-1172, 1174-1195, 1190-1212, 1206-1239, 1246-1275, 1275-1304, 1361-1387, 1377-1403, 1404-1432, 1456-1481, 1495-1513, 1524-1553 and 1552-1583, of the HCV protein,

b) the peptides comprising less than the entire sequence of the peptides as defined in a) and including at least 11 consecutive amino acids of the peptides as defined in a), and

c) the peptides derived from the peptides as defined in a) or in b) and further modified by substitution of cysteine residues for the alanine residues (C → A) at position +1 or +2, relative to the amino acid residue at the N-terminal position, and/or at position -1, -2 or -3, relative to the amino acid residue at the C-terminal position.

Claim 36 (previously presented): The peptide mixture as claimed in claim 35, wherein the peptides of at least 11 amino acids as defined in b) are selected from the group consisting of:

- the peptides included in peptide 1007-1037; that correspond, respectively, to positions 1007-1021, 1015-1029, 1015-1037, 1019-1033 and 1020-1034,
- the peptides included in peptide 1174-1195 that correspond, respectively, to positions 1174-1188, 1174-1192 and 1178-1192,
- the peptides included in peptide 1190-1212 10 that correspond, respectively, to positions 1190-1204 and 1192-1206,
- the peptides included in peptide 1246-1275 that correspond, respectively, to positions 1246-1260, 1246-1264, 1250-1264 and 1261-1275,
- the peptides included in peptide 1377-1403 that correspond, respectively, to positions 1381-1395, 1381-1397, 1381-1403 and 1383-1397,
- the peptide included in peptide 1495-1513 that corresponds, respectively, to positions 1495-1509,
- the peptides included in peptide 1524-1553 that correspond, respectively, to positions 1524-1552, 1524-1538, 1528-1542, 1528-1552, 1529-1543, 1534-1548, 1538-1552 and 1540-1553, and
- the peptides included in peptide 1552-1583 I 25 that correspond, respectively, to positions 1559-1573 and 1563-1577.

Claim 37 (previously presented): The peptide mixture as claimed in claim 35, wherein the peptides as defined in c) are selected from the group consisting of the following sequences SEQ ID NO.:10, SEQ ID NO 13, SEQ ID NO 20, SEQ ID NO 22 and SEQ ID NO 24 and the sequences derived from the sequence of SEQ ID NO:24 that correspond, respectively, to positions 1524-1538, 1524-1552, 1528-1552, 1538-1552 and 1540-1553 of the HCV protein.

Claim 38 (previously presented): The peptide mixture as claimed in claim 27, wherein said peptides include peptides derived from the C and NS3 proteins of the HCV genotype 1.

Claim 39 (previously presented): The peptide mixture as claimed in claim 27, wherein 2 to 6 different peptides derived from the C and NS3 proteins are included, all of which peptides bind to at least 10 different HLA II molecules whose allelic frequency is greater than 5% in the Caucasian population.

Claim 40 (previously presented): The peptide mixture as claimed in claim 39, wherein the peptides are selected from the group consisting of the peptides derived from the C protein that correspond, respectively, to positions 27-51, 131-167, 127-149, 131-148 and 148-167 and the peptides derived from the NS3 protein that correspond, respectively, to positions 1007-1037, 1015-1037, 1036-1055, 1174-1192, 1190-1212, 1246-1264, 1381-1403, 1381-1397, 1524-1553, 1528-1552 and 1552-1583 of the HCV protein.

Claim 41 (previously presented): The peptide mixture as claimed in claim 27, wherein the peptides are in the form of a single fusion protein comprising a sequence of the peptides of said mixture, with the exclusion of the sequence corresponding to the fusion of the peptides C 31-45, C 141-155 and NS3 1207-1221 of the HCV protein.

Claim 42 (withdrawn): A nucleic acid molecule that encodes a fusion protein as claimed in claim 41.

Claim 43 (withdrawn): A recombinant vector, comprising a nucleic acid molecule as claimed in claim 42.

Claim 44 (withdrawn): A cell that has been transformed with a vector as claimed in claim 43.

Claim 45 (previously presented): An anti-HCV immunogenic composition, comprising at least one peptide mixture as claimed in claim 27 in combination with at least one pharmaceutically acceptable vehicle.

Claim 46 (previously presented): The anti-HCV immunogenic composition as claimed in claim 45 further comprising an adjuvant.

Claim 47 (withdrawn): An anti-HCV immunogenic composition, comprising at least one nucleic acid molecule as claimed in claim 42 in combination with at least one pharmaceutically acceptable vehicle.

Claim 48 (withdrawn): The anti-HCV immunogenic composition as claimed in claim 47 further comprising an adjuvant.

Claim 49 (withdrawn): An anti-HCV immunogenic composition, comprising at least one recombinant vector as claimed in claim 43 in combination with at least one pharmaceutically acceptable vehicle.

Claim 50 (withdrawn): The anti-HCV immunogenic composition as claimed in claim 49 further comprising an adjuvant.

Claim 51 (previously presented): The immunogenic composition as claimed in claim 45, wherein said peptides are selected from the group consisting of modified peptides, peptides associated with liposomes and peptides associated with lipids.

Claim 52 (previously presented): The immunogenic composition as claimed in claim 51, wherein said peptide mixture is combined:

- with one or more peptides or lipopeptides containing one or more CD8+ epitopes,
- with other peptides comprising multiple CD4+ epitopes and/or
- with one or more peptides or lipopeptides containing one or more B epitopes.

Claim 53 (previously presented): The immunogenic composition as claimed in claim 52 wherein said CD8+ epitopes are selected from the group consisting of the C peptides 2-10, 28-36, 35-44, 41-49, 42-50, 85-98, 88-97, 127-140, 131-140, 132-140, 167-176, 178-187, 181-190; the El peptides 220-227, 233-242, 234-242, 363-371; the E2 peptides 401-411, 460-469, 489-496, 569-578, 621-628, 725-733; the NS2 peptides 826-838, 838-845; the NS3 peptides 1073-1081, 1169-1177, 1287-1296, 1395-1403, 1406-1415; the NS4A peptides 1585-1593, 1666-1675; the NS4B peptides 1769-1777, 1789-1797, 1807-1816, 1851-1859; the NSSA peptide 2252-2260 and the NS5B peptides 2588-2596 and 2727-2735 of the HCV protein.

Claim 54 (previously presented): The immunogenic composition as claimed in claim 52 wherein said CD4+ epitopes are selected from the group consisting of the tetanus toxin TT peptide (positions 830-846), the *Influenza* hemagglutinin HA peptide (positions 307-319), PADRE and the *Plasmodium falciparum* LSA3 peptide.

Claim 55 (previously presented): The immunogenic composition as claimed in claim 52 wherein said B epitopes are specifically recognized by antibodies directed against either the C peptide 5-27, the NS4 peptide 1698-1719 or the NS5 peptide 2295-2315 of the HCV protein.

Claim 56 (previously presented): A vaccine comprising an immunogenic composition as claimed in claim 45.

Claim 57 (previously presented): A peptide selected from the group consisting of:

the peptides derived from the C protein of HCV that bind to at least four different HLA II molecules whose allelic frequency is greater than 5% in the Caucasian population with a binding activity of <1000 nM, with the exclusion of the peptide C 31-45, 21-40, C 20-44, C 23-42, C 111-130, C 109-128, C 128-152, C 131-150, C 133-152, C 138-162, C 141-155, C 142-161, C 141-160 and C 145-164,

- the peptides derived from the NS3 protein of HCV selected from the group consisting of peptides corresponding, respectively, to positions 1007-1037, 1036-1055, 1052-1072, 1076-1093, 1127-1153, 1149-1172, 1174-1195, 1190-1212, 1206-1239, 1275-1304, 1361-1387, 1377-1403, 1404-1432, 1456-1481, 1495-1513, 1524-1553 and 1552-1583,

the peptides of at least 11 consecutive amino acids included in the above peptides, with the exclusion of the peptides NS3 1384-1401 and NS3 1207-1221,

- the peptides corresponding, respectively, to positions 1246-1260 and 1261-1275 of the HCV protein, and

- the peptides derived from the above peptides modified by substitution of cysteine residues for the alanine residues (C $\rightarrow$ A) at positions +1 or +2, relative to the amino acid residue at the N-terminal position and/or at positions -1, -2 or -3, relative to the amino acid residue at the C-terminal position.

Claim 58 (previously presented): A diagnostic reagent comprising at least one peptide as claimed in claim 57 either labeled or complexed in the form of multimeric complexes.

Claim 59 (withdrawn): A method for evaluating the immune state of an individual, comprising detecting the presence of CD4+ T cells specific for HCV peptides by administration of the diagnostic reagent of claim 58 followed by application of an appropriate mechanism adequate for detection of the label or complex.

Claim 60 (withdrawn): A method for sorting HCV-specific T lymphocytes, comprising at least the following steps:

- bringing a suspension of cells to be sorted into contact with one or more labeled tetramers formed from complexes of C and/or NS3 peptides of the HCV protein and with soluble HLA II molecules, and
- separating the cells labeled with the tetramers from the unlabeled cells.

Claim 61 (withdrawn): A method for evaluating the immune state of an individual, comprising detecting the presence of CD_4+ T cells specific for HCV peptides by administration of a peptide as defined in claim 26 either labeled or complexed in the form of multimeric complexes followed by detection of the label or complex.

Claim 62 (withdrawn): A method for evaluating the immune state of an individual, comprising detecting the presence of CD_4+ T cells specific for HCV peptides by administration of a peptide as defined in claim 27 either labeled or complexed in the form of multimeric complexes followed by detection of the label or complex.

Claim 63 (withdrawn): A method for evaluating the immune state of an individual, comprising detecting the presence of CD_4+ T cells specific for HCV peptides by administration of a peptide as defined in claim 26 and detection of the complex formed between CD_4+ T cells and said peptide.

Claim 64 (withdrawn): A method for evaluating the immune state of an individual, comprising detecting the presence of CD_4+ T cells specific for HCV peptides by administration of a peptide as defined in claim 27 and detection of the complex formed between CD_4+ T cells and said peptide.